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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,968	06/09/2000	Animesh Ray	176/60581 (1-11027-845)	2086

7590 01/08/2003
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EXAMINER

ZARA, JANE J

ART UNIT	PAPER NUMBER
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1635

DATE MAILED: 01/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/590,968

Applicant(s)
Ray et al

Examiner
First Last

Art Unit
1234



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 3, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above, claim(s) 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 18-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

This Office action is in response to the communication filed October 3, 2002, Paper No.

10.

Claims 1-25 are pending in the instant application.

Response to Arguments and Amendments

Withdrawn Rejections

Rejection of claims 4, 7, 8, 18-25 under 35 U.S.C. 112, second paragraph, is hereby withdrawn in light of Applicants' amendments filed October 3, 2002, Paper No. 2.

Rejection of claims 1-3, 5 and 6 under 35 U.S.C. 102(a) as being anticipated by Ecker is hereby withdrawn in light of Applicants' declaration filed October 3, 2002, Paper No. 2.

Maintained Rejections

Claims 1, 4-15 and 18-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, for the reasons or record set forth in the Office action mailed March 28, 2002, Paper No. 8.

Applicant's arguments filed October 3, 2002 have been fully considered but they are not persuasive. Applicants argue that adequate written description has been provided in the instant disclosure because SIN1 encodes a multidomain protein comprising NLS, an RNA helicase C motif, 2 RNase III catalytic domains, PIMS, and 2 C terminal repeats of a dsRNA binding

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domain, and furthermore, only 2 genes have been identified in *Arabidopsis thaliana* with the activities encoded by wild type SINI. Contrary to Applicants' assertions, the requirement of multidomains for a functional protein, and the characterization of two proteins associated with SINI function in *Arabidopsis* do not provided adequate and specific guidance for the broad claims, which encompass any and/or all nucleic acids encoding SINI in any organism, including any nucleic acid which contain a minimum of 55% similarity to SEQ ID NO: 1. The characterization of a multidomain protein of SIN1 in *Arabidopsis* does not provide adequate guidance for nucleic acid sequences that exist in any and/or all organisms that encode SINI, and contain as little as 55% sequence similarity with SEQ ID NO: 1. Applicant was not in possession of the broad genus encompassing any and/or all nucleic acids encoding SIN1, obtained from any and/or all organisms.

Claims 1-15 and 18-25 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an isolated nucleic acid molecule of SEQ ID NO: 1, does not reasonably provide enablement for isolated nucleic acid molecules encoding any and/or all short integuments1 proteins, nor any methods modulating the fertility of any plants, nor methods of generating transgenic plants comprising the transduction of plant cells with a nucleic acid molecule encoding a short integuments1 protein, for the reasons or record set forth in the Office action mailed March 28, 2002, Paper No. 8.

Applicant's arguments filed October 3, 2002 have been fully considered but they are not persuasive. Applicants argue that it would not require undue experimentation beyond that which

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has been provided in the instant disclosure, to isolate and characterize any and/or all nucleic acids encoding SIN1, obtained from any and/or all organisms. The disclosure provides specific guidance for the methods of increasing fecundity in plants comprising their transduction with SEQ ID NO: 1. It would take undue experimentation beyond that which has been taught in the instant disclosure, and including the data provided in the declaration filed October 3, 2002, and including the sequence similarities of the various domains within the SIN1 sequence of SEQ ID NO: 1, to increase fecundity in a plant comprising transduction with any and/or all nucleic acid sequences that share 55% homology with SEQ ID NO: 1. The identification of the various domains within SEQ ID NO: 1 does not enable the broad scope claimed. Applicant was not enabled for the broad scope comprising compositions and methods drawn to increasing fecundity in plants comprising transduction with any and/or all sequences encoding SIN1, including any and/or all nucleic acids which share at least 55% sequence similarity to SEQ ID NO: 1.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR

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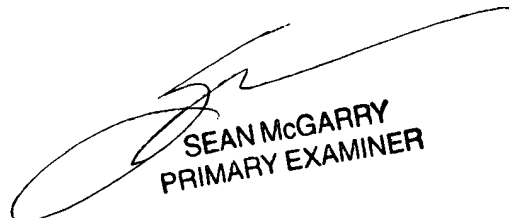
1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Certain papers related to this application may be submitted to Art Unit 1635 by facsimile transmission. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 C.F.R. § 1.6(d)). The official fax telephone numbers for the Group are (703) 308-4242 and (703) 305-3014. NOTE: If Applicant *does* submit a paper by fax, the original signed copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jane Zara** whose telephone number is (703) 306-5820. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John LeGuyader, can be reached on (703) 308-0447. Any inquiry regarding this application should be directed to the patent analyst, Katrina Turner, whose telephone number is (703) 305-3413. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

JZ

December 27, 2002


SEAN MCGARRY
PRIMARY EXAMINER